

# System Quality Consultants, Inc.

N00014-94-C-2063

## TECHNICAL STATUS REPORT

FOR THE PERIOD ENDING 31 Jan 95

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### Executive Summary

During this month's reporting period, SQC continued to provide project management to the Backgrounds Data Center (BDC). In addition to the Project Manager, SQC provided management of the Operations, Software Development, Project Support, and Specification and Test efforts. The most significant events that occurred are the continuation of MSX Data System Tests and the continued upgrade to the pipeline software and the operations procedures.

### Task 1--Project Management Support

#### Abstract

This task requires SQC to provide risk management analysis, software cost estimates, procurement strategies, program office organization and staff planning, schedule and resource allocation planning, program planning and documentation, project control system accounting, and training.

### Work Performed During JAN 95

Provided Specification & Test (S&T), Software Development, Operations, and Project Support Office input to MSX project GANTT and PERT charts for scheduling and resource allocation planning.

Provided S&T, Software Development, Operations and Project Support Office input to the monthly MSX and Core status reports.

Produced GANTT schedules for the BDC.

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Revised data bases to streamline PR/CR processing.

Provided inputs and recommendations for BDC staffing and organizational changes necessitated by the delay of the MSX launch.

**DISTRIBUTION STATEMENT A**

Approved for public release;  
Distribution Unlimited

**DTIC QUALITY INSPECTED 1**

### Anticipated Activities During FEB 95

Continue the production of GANTT schedules and PERT charts.

Continue to provide input for FY95 budget, project planning, and monthly status reports.

Continue activities to streamline PR/CR processing.

Provide inputs for the FY96 BDC budgets.

### Task 2--Management Plan Development

#### Abstract

This task requires SQC to develop and present program management plans, software development plans, configuration management plans, quality assurance plans, test plans, and independent verification and validation plans for use on Naval Research Laboratory's (NRL) programs.

### Work Performed During JAN 95

Chaired EIGHT (8) Configuration Control Boards (CCB) which processed NINETY-FIVE (95) Problem Report/Change Request (PR/CR) actions. This included TWELVE (12) new PR/CRs, THIRTY (30) analyses, ELEVEN (11) implementations, SEVEN (7) validations, SEVEN (7) QEs, and TWENTY-EIGHT (28) closures.

Continued work on revising the Configuration Management Plan (CMP).

Three (3) software PR/CRs and fourteen (14) DCRs were analyzed; nineteen (19) DCR fixes were implemented; and one (1) DCRs were closed during this reporting period.

### Anticipated Activities During FEB 95

Chair CCBs as required.

Produce the first draft of the BDC User's Guide.

Managed SW development activities including that for MSX pipeline processing and for the Visual Interface for Space and Terrestrial Analysis (VISTA).

### Task 3--Detailed Process Development

#### Abstract

This task requires SQC to develop and present processes (process flow diagrams, step-by-step procedures, quality assurance procedures, and quality checklists) to be used on NRL programs.

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### **Work Performed During JAN 95**

Managed the effort to upgrade all of the Operations Procedures. Six (6) procedures were written and/or revised during this reporting period.

Signed six (6) OCM procedures.

Managed the effort to verify Operational process compliance through the use of Quality Assurance audits of procedures. Procedures were redlined and changes were incorporated into the procedures.

### **Anticipated Activities During FEB 95**

Continue Operational procedure QA audits.

Continue upgrading the Operational Configuration Management Procedures.

Manage the effort to update OCM and Archive Library procedures.

### **Task 4--Requirements Development**

#### **Abstract**

This task requires SQC to meet with NRL scientists, users, customers, and others identified by the Contracting Officer's Technical Representative to document project requirements. SQC is required to document requirements in Type A and Type B specifications. The requirements are to provide program managers with capability for product assessment through analysis and testing of performance parameters. SQC is to determine performance requirements and demonstrate satisfaction through testing.

### **Work Performed During JAN 95**

Received and incorporated an additional set of PLDAF review comments to version 0.0.7 of the BDC to PLDAF ICD.

BDC and OSDP DPC approval signatures have been obtained for the BDC to OSDP DPC ICD.

Version 2.0 of the BDC to MDDC ICD and version 0.0.4 of the BDC to EMDAC ICD were distributed for internal BDC review and posted to SCIES for external review. These two ICDs were revised as a result of MDDC's change in scope and the resulting TIM between the BDC, MDDC, EMDAC, and DM.

The latest revisions to the SDAC to BDC, SP3 DPC to BDC, and SPOCC to BDC ICDs were distributed for BDC review.

### **Anticipated Activities During FEB 95**

Release the BDC to PLDAF, BDC to OSDP DPC, BDC to MDDC, and BDC to EMDAC ICDs as requirements documents.

## **Task 5--Documentation Review**

### **Abstract**

This task requires SQC to review documents prepared by NRL contractors in a variety of activities for compliance with relevant established standards, development plans, and management plans and to provide comments and recommendations to NRL. The task also requires SQC to perform technical reviews and audits (formal design reviews, informal reviews, and administrative reviews) on NRL's contractor developed hardware, software, facilities, and management documents.

### **Work Performed During JAN 95**

Reviewed final versions of six OCM operational procedures providing change control and PR/CR processing instructions.

Reviewed two Quality Evaluation procedures.

Signed six (6) OCM procedures.

Reviewed several draft procedures from an S&T perspective.

### **Anticipated Activities During FEB 95**

Review and sign OCM and Archive Library procedures.

Continue updates to the STD.

Provide S&T team support to the review of BDC documents and procedures and DM test procedures.

Review other documents as required.

## **Task 6--Technical Information Preparation and Presentation**

### **Abstract**

This task requires SQC to prepare and provide formal and informal state-of-the-art techniques presentations in Project and Process Management disciplines.

## **Work Performed During JAN 95**

Prepared and distributed CCB Minutes.

Prepared and distributed Status Reports on DM PRs, Priority 2 PR/CRs and Priority 3 PR/CRs.

Revised data bases to provide additional status reports.

Attended the MSX DM TIM at JHU/APL.

Hosted DM, MDDC, EMDAC, and SP3 DPC representatives at the BDC for discussions about changes to ICD requirements.

## **Anticipated Activities During FEB 95**

Prepare and distribute CCB Minutes.

Prepare and distribute Status Reports on DM PRs, Priority 2 PR/CRs and Priority 3 PR/CRs.

## **Task 7--Formal Test Case and Test Procedure Development and Execution**

### **Abstract**

This task requires SQC to develop and execute detailed test cases and procedures designed to validate designated developed products prior to their being declared operational. The testing must demonstrate that all system elements satisfy NRL requirements. SQC must also verify that testing spans the overall acquisition cycle.

## **Work Performed During JAN 95**

Managed and provided guidance for the preparation of formal test cases, test case descriptions, and test procedures. During this reporting period, change pages for the System Test Description (STD) were submitted to OCM, including Sections 2, 3, and Test Procedure revisions of six test cases, and two new test cases. Operators initiated execution of these OCM controlled test procedures.

During the reporting period, SQC continued the management of and coordinated the planning and preparation activities necessary to successfully execute Data System Tests (DST). These activities included reprocessing the DST 5.4a test data on the pipeline system, using a new software build which was installed on the pipeline this reporting period, tracking the status of Operator Discrepancy Forms (ODF), PR/CRs and Data Management (DM) Problem Reports (PR), monitoring approved revisions to the MSX pipeline software, and operating procedures, the retesting effort, and closing all open DST issues. Worked with Operations and Software Development to find solutions to new problems which were encountered.

The Specification & Test team, under SQC's management, acted as the central repository for problem reporting and resolution. This included coordination of problem resolution both internally at the BDC and externally between the other participating MSX data organizations.

#### **Anticipated Activities During FEB 95**

Coordinate BDC activities required to complete MSX DST 5.4a.

Continue managing the FOC testing activities.